Kennecott Corporation
10 East South Temple
P.O. Box 11248
Salt Lake City, Utah 84147
(801) 322-8270
FAX (801) 322-8181

Gregory H. Boyce
Director, Government
and Public Affairs

Wayne: do you want to attend?

February 26, 1993

Kennecott

Mr. Lowell Braxton
Div. of Oil, Gas & Mining
3 Triad Center - Suite 350
Salt Lake City, UT 84101

Dear Mr. Braxton:

As part of our continuing effort to keep you updated on the status of activities and projects at Kennecott, I would like to remind you of an upcoming public hearing regarding the construction of our $880 million modernized smelter and refinery.

On November 24, 1992, Kennecott submitted formal documents to the State Division of Air Quality for the construction of the modernized smelter. The documents confirm the dramatic air emissions reduction announced earlier in 1992.

On Thursday, March 4 at 7:30 p.m. the Utah State Division of Air Quality will hold a public hearing on Kennecott's permit - formally called a Notice of Intent - for construction of the new smelter. This hearing will be held at the Utah Department of Environmental Quality, 168 North 1950 West, Room 201. Enter through the east door and proceed to the second floor. A copy of the Notice of Intent is available for your review at the Division of Air Quality, 1950 West North Temple, Salt Lake City, Utah.

We at Kennecott value your input and appreciate your participation in this public hearing process. We want to keep you informed on the status of our smelter project, as well as the cleanup projects Kennecott has completed or are underway at our Utah Copper property. I have attached a copy of the "Kennecott Environmental Update" summarizing these efforts.

If you have any questions or would like more information on any of these issues, please feel free to contact me at 322-8270 or Alexis Fernandez at 322-8036.

Sincerely,

G. H. Boyce

Gregory H. Boyce

GHB:sn
Enclosure

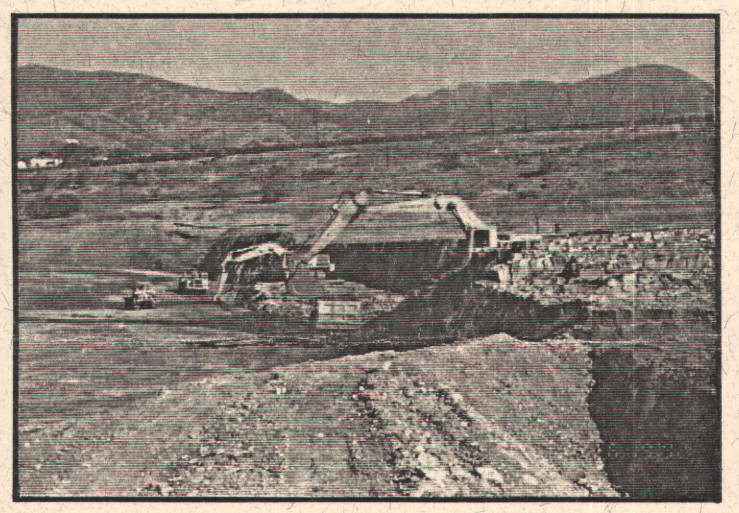
b:228

0007

Kennecott

Kennecott Utah Copper
Cleanup Projects Completed or Underway

ENVIRONMENTAL UPDATE
WINTER 1993



Sludge removal at large Bingham reservoir

LARGE BINGHAM RESERVOIR SLUDGE REMOVAL

BACKGROUND

The Large Bingham reservoir was constructed east of the mouth of Bingham Canyon in the 1960's to store all waters from Bingham Creek as well as leach water generated from the mine waste dumps. It was constructed with a liner of natural, low permeability soils. As a result of a Kennecott-funded study beginning in the mid-1980's, it was found that waters were leaking from the reservoir, primarily from the sides rather than the bottom. Kennecott has managed the water level in the reservoir at a low level since 1986 to minimize such leakage. This leakage, along with natural contributions of contaminants from the mineralization in the Oquirrh Mountains and other sources, has contributed to a groundwater plume just east of the reservoir.

In 1990, Kennecott built a smaller, double-lined reservoir to store excess leach waters and prevent them from flowing into the Large Reservoir. The Large Reservoir was drained, and the sludge that has accumulated in it is now being removed.

PROJECT STATUS

In February of 1992, Kennecott completed draining the remaining waters from the Large Reservoir and began removing more than 2,000,000 cubic yards of sludge and copper tailings. These materials were tested and found to be non-hazardous. As of October 1992, the excavation of the sludge is 60 percent complete. The cleaned portion of the reservoir is now being lined with a state-of-the-art liner system to hold the storm water before it is returned to the mining and milling operations.

The sludge has been selectively placed within the Bingham Canyon Mine waste rock dumps, which drain into the existing leach collection system. These areas are being recontoured, covered with topsoil and revegetated.

Once the sludge removal is complete, the remainder of the Large Reservoir will also be lined. The sludge removal project is being conducted under the oversight of the U.S. Environmental Protection Agency.

The lining of the cleaned portion of the Large Reservoir is scheduled to be completed in early 1993. The remainder of the sludge removal and subsequent lining of the balance of the Large Reservoir is expected to be completed by 1995, depending on the progress made in removing the sludge.

BUTTERFIELD WASTE ROCK RELOCATION

BACKGROUND

Mine development rock, which was placed in and along the Butterfield Canyon stream bed, was generated from the construction of the Butterfield drainage tunnel by a mining operation which pre-dates Kennecott. The canyon is a popular recreational area for the public, including those who travel along the Oquirrh Loop leading over the Oquirrh Mountains to Tooele. Kennecott is relocating the waste rock and reclaming the area. In 1992 Kennecott and EPA entered into an agreement which provides EPA oversight for this project.

PROJECT STATUS

Kennecott has completed the process of removing the waste rock from the stream bed.

Approximately 900,000 cubic yards of waste rock have been excavated from along the stream and relocated into a monitored repository at the toe of the Castro Gulch waste rock dumps.

As of today, the repository has been constructed and the waste rock has been removed. The county road and a natural gas pipeline have been relocated. The plan also calls for revegetation of the area from which the waste rock was removed and for topsoiling and revegetating the waste rock repository. The final reclamation work will be completed this year.

BINGHAM CREEK TAILINGS

BACKGROUND

Contaminated soil in the Bingham Creek area was formed as a result of lead tailings deposited into Bingham Creek by about two dozen lead mining and milling companies that operated in the area from 1874 to 1930. Although Kennecott never milled lead ore in the Bingham Canyon Mining District, the contaminated soils are partially on property Kennecott now owns. In May of 1991, Kennecott announced that the State of Utah and the U.S. Environmental Protection Agency had agreed to accept its voluntary offer to pay for the cleanup of contaminated soils in the Jordan View Estates area. The Environmental Protection Agency completed the residential area work last year. Kennecott completed the construction of a repository to hold the contaminated materials.

PROJECT STATUS

During 1992, Kennecott continued to clean up portions of the Bingham Creek channel. For example, Kennecott voluntarily cleaned up the stretch of Bingham Creek near Holy Cross Jordan Valley Hospital at 9000 South and 3600 West, just upstream from last year's removal action. Kennecott and EPA completed the work last August. Kennecott is also working to clean up tailings located on the north side of Bingham Creek and west of Highway 111. Additionally, Kennecott has removed contaminated sediments from a series of ditches and a pond located along the upper reaches of Bingham Creek. Kennecott placed the tailings and sediments removed from these areas in the same repository as the residential area tailings. Kennecott will be working jointly with EPA to accomplish additional removal work this year.

LARK AREA

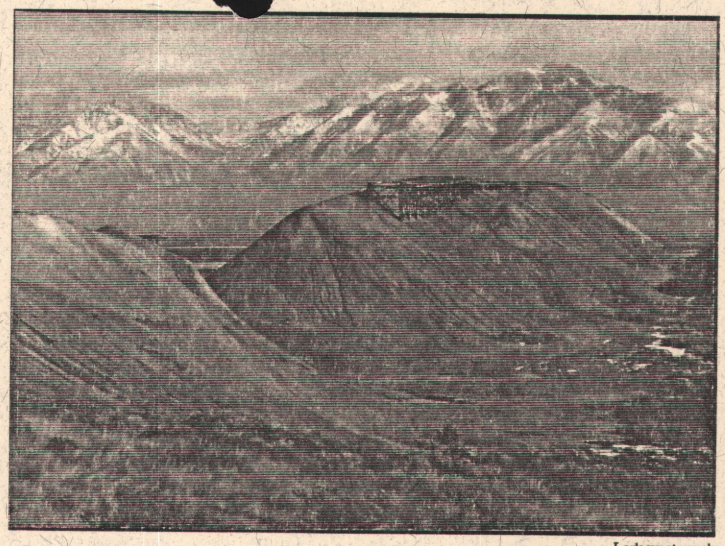
BACKGROUND

The Lark area contains two types of mine wastes: waste rock and tailings. These materials are spread over an area of about 450 acres on land now owned by Kennecott. The Lark waste rock was generated by the Ohio Copper Company and the U.S. and Lark Mine.

Vegetation that once covered large areas of the Lark tailings was destroyed when the State of Utah leased the property from Kennecott and operated the site as a motorcycle park. Most of the Lark tailings was reprocessed and has very low metals concentrations, typical of soils in the area. There are, however, a few "hot spots".

PROJECT STATUS

Kennecott has prepared remediation plans for the area, and has conducted some test plantings to determine which soil amendments, seeds, and plants would best suit the area. Kennecott plans to remove the Lark waste rock piles to the toe of its



Lark waste rock

copper mine waste rock dumps, where they will be buried. This location is within the Kennecott leach collection system, so any leach waters generated by the rock would be captured and processed by Kennecott.

"Hot spots" within the Lark tailings would also be excavated and disposed in the permitted tailings waste repository in the Bluewater drainage. The remainder of the Lark tailings would be consolidated, covered with calcium carbonate-rich soils, and revegetated to prevent windborne transport of dust from the tailings.

EAST SIDE COLLECTION SYSTEM

BACKGROUND

Kennecott has collected leach waters from the base of the copper mine waste rock piles for decades. The leach water, which is acidic due to natural chemical reactions within the rock piles, is processed to recover the dissolved copper and is then recycled back to the waste rock piles. Kennecott has continually been improving the leach collection system to maximize capture of leach waters. The latest series of improvements includes the detailed evaluation of geologic formations in each of the 22 drainages which emanate from the base of the waste rock piles and the construction of cutoff structures to more completely intercept and capture the leach waters and storm waters which flow from the area.

PROJECT STATUS

Kennecott has begun its leach collection system improvements at the north end of the waste rock piles and is proceeding with the geologic investigations, waste rock removal, and cutoff structure construction. To date, Kennecott has installed numerous ground water monitoring wells, has relocated about 1,000,000 cubic yards of waste rock and other debris back to the main waste rock piles and has completed eight of the improved cutoff walls. Five additional cutoff walls are under construction. Kennecott has also nearly completed a new roadway and canal alignment for an extension of the leach collection system to the far south end of the waste rock piles, within Butterfield Canyon.